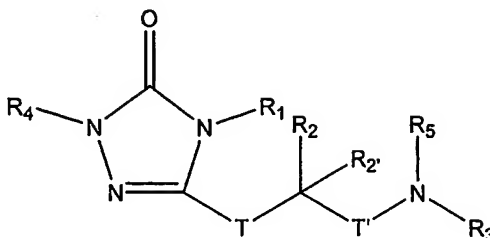


*What is claimed is:*

1. A compound selected from the group represented by Formula I:



Formula I

wherein:

T and T' are independently a covalent bond or optionally substituted lower alkylene;

R<sub>1</sub> is chosen from hydrogen, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, and optionally substituted heteroaralkyl;

R<sub>2</sub> and R<sub>2'</sub> are independently chosen from hydrogen, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, and optionally substituted heteroaralkyl; or R<sub>2</sub> and R<sub>2'</sub> taken together form an optionally substituted 3- to 7-membered ring;

R<sub>3</sub> is chosen from hydrogen, optionally substituted alkyl-, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heteroaryl-, optionally substituted heteroaralkyl-, -C(O)-R<sub>6</sub>, and -S(O)<sub>2</sub>-R<sub>6a</sub>;

R<sub>4</sub> is independently chosen from hydrogen, optionally substituted alkyl, carboxyalkyl, aminocarbonyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaralkyl, optionally substituted heterocyclyl and optionally substituted heteroaryl;

R<sub>5</sub> is chosen from hydrogen, optionally substituted alkyl-, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heteroaralkyl-, and optionally substituted heterocyclyl-;

or R<sub>5</sub> taken together with R<sub>3</sub>, and the nitrogen to which they are bound, form an

optionally substituted 5- to 12-membered nitrogen-containing heterocycle, which optionally incorporates from one to two additional heteroatoms, selected from N, O, and S in the heterocycle ring;

or R<sub>5</sub> taken together with R<sub>2</sub> form an optionally substituted 5- to 12-membered nitrogen-containing heterocycle, which optionally incorporates from one to two additional heteroatoms, selected from N, O, and S in the heterocycle ring;

R<sub>6</sub> is chosen from hydrogen, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, optionally substituted heteroaralkyl, R<sub>7</sub>O- and R<sub>11</sub>-NH-;

R<sub>6a</sub> is chosen from hydrogen, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, optionally substituted heteroaralkyl, and R<sub>11</sub>-NH-;

R<sub>7</sub> is chosen from optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, and optionally substituted heteroaralkyl;

R<sub>11</sub> is chosen from hydrogen, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, and optionally substituted heteroaralkyl;

a pharmaceutically acceptable salt of a compound of Formula I;

a pharmaceutically acceptable solvate of a compound of Formula I; or

a pharmaceutically acceptable solvate of a pharmaceutically acceptable salt of a compound of Formula I,

provided that R<sub>1</sub> is not optionally substituted phenyl when R<sub>4</sub> is optionally substituted phenyl.

2. The compound of Claim 1 comprising one or more of the following:

T and T' are absent;

R<sub>1</sub> is selected from hydrogen, optionally substituted lower alkyl, optionally substituted benzyl, optionally substituted naphthylmethyl, and optionally substituted phenyl;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>2'</sub> is hydrogen or optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>4</sub> is hydrogen, optionally substituted alkyl, optionally substituted aralkyl, optionally substituted aryl, carbamyl, heteroaryl, or optionally substituted heterocyclyl;

R<sub>3</sub> is -C(O)R<sub>6</sub> or -SO<sub>2</sub>R<sub>6a</sub>;

R<sub>6</sub> is selected from optionally substituted C<sub>1</sub>-C<sub>8</sub> alkyl, optionally substituted aryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl, optionally substituted aryl, R<sub>7</sub>O- and R<sub>11</sub>-NH-;

R<sub>6a</sub> is chosen from phenyl substituted with halo, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, cyano, nitro, methylenedioxy, or trifluoromethyl and naphthyl;

R<sub>7</sub> is chosen from optionally substituted C<sub>1</sub>-C<sub>8</sub> alkyl and optionally substituted aryl;

R<sub>11</sub> is chosen from hydrogen, optionally substituted C<sub>1</sub>-C<sub>8</sub> alkyl and optionally substituted aryl; and

R<sub>5</sub> is chosen from optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, and optionally substituted heteroaralkyl.

3. The compound of Claim 2 comprising one or more of the following:

R<sub>1</sub> is chosen from hydrogen, ethyl, propyl, methoxyethyl, naphthyl, phenyl, bromophenyl, chlorophenyl, methoxyphenyl, ethoxyphenyl, tolyl, dimethylphenyl, chlorofluorophenyl, methylchlorophenyl, ethylphenyl, phenethyl, benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, hydroxybenzyl, tetrahydrofuranylmethyl, dichlorobenzyl, furanylmethyl, dimethoxybenzyl, naphthylmethyl, and (ethoxycarbonyl)ethyl;

R<sub>2</sub> is hydrogen;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>4</sub> is methyl, ethyl, propyl, phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, dihalophenyl-, pyridinyl, or benzyl;

R<sub>3</sub> is -C(O)R<sub>6</sub>;

R<sub>6</sub> is C<sub>1</sub>-C<sub>8</sub> alkyl, optionally substituted aryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl, and optionally substituted aryl; and

R<sub>5</sub> is selected from optionally substituted alkyl, optionally substituted cyclohexyl; phenyl substituted with hydroxy, halogen, lower alkoxy or lower alkyl; benzyl; heteroarylmethyl; heteroarylethyl; and heteroarylpropyl.

4. The compound of Claim 3 comprising one or more of the following:

R<sub>1</sub> is benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, or hydroxybenzyl;

R<sub>2</sub> is chosen from methyl, ethyl, propyl, butyl, methylthioethyl, methylthiomethyl, aminobutyl, (CBZ)aminobutyl, cyclohexylmethyl, benzyloxymethyl, methylsulfinylethyl,

methylsulfinylmethyl, and hydroxymethyl;

R<sub>2</sub>' is hydrogen;

R<sub>4</sub> is phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, or dihalophenyl-;

R<sub>6</sub> is tolyl, halophenyl, methylhalophenyl, hydroxymethylphenyl, methylenedioxyphenyl, formylphenyl, halo(trifluoromethyl)phenyl-, or cyanophenyl; and

R<sub>5</sub> is aminopropyl-, pyrrolidinylmethyl-, or piperidinylmethyl-.

5. The compound of Claim 1 comprising one or more of the following:

R<sub>1</sub> is benzyl;

R<sub>2</sub>' is hydrogen; and

R<sub>2</sub> is ethyl or propyl.

6. The compound of Claim 5 wherein R<sub>2</sub> is i-propyl

7. The compound of Claim 1 comprising one or more of the following:

T and T' are absent;

R<sub>1</sub> is selected from hydrogen, optionally substituted lower alkyl, optionally substituted benzyl, optionally substituted naphthylmethyl, and optionally substituted phenyl;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>2</sub>' is hydrogen or optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

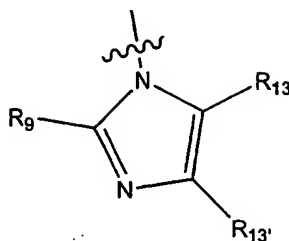
R<sub>4</sub> is hydrogen, optionally substituted alkyl, optionally substituted aralkyl, optionally substituted aryl, carbamyl, heteroaryl, or optionally substituted heterocyclyl;

R<sub>6</sub> is selected from optionally substituted C<sub>1</sub>-C<sub>8</sub> alkyl, optionally substituted aryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl, optionally substituted aryl, R<sub>7</sub>O- and R<sub>11</sub>-NH-;

R<sub>7</sub> is chosen from optionally substituted C<sub>1</sub>-C<sub>8</sub> alkyl and optionally substituted aryl;

R<sub>11</sub> is chosen from hydrogen, optionally substituted C<sub>1</sub>-C<sub>8</sub> alkyl and optionally substituted aryl; and

R<sub>3</sub> taken together with R<sub>5</sub> and the nitrogen to which they are bound, forms an optionally substituted imidazolyl ring of the formula:



wherein

R<sub>9</sub> is chosen from hydrogen, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaralkyl, optionally substituted aralkoxy, optionally substituted heteroaralkoxy, and optionally substituted heteroaryl; and

R<sub>13</sub> and R<sub>13'</sub> are independently hydrogen, optionally substituted alkyl, optionally substituted aryl, or optionally substituted aralkyl.

8. The compound of Claim 7 comprising one or more of the following:

R<sub>1</sub> is chosen from hydrogen, ethyl, propyl, methoxyethyl, naphthyl, phenyl, bromophenyl, chlorophenyl, methoxyphenyl, ethoxyphenyl, tolyl, dimethylphenyl, chlorofluorophenyl, methylchlorophenyl, ethylphenyl, phenethyl, benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, hydroxybenzyl, tetrahydrofuranylmethyl, dichlorobenzyl, furanylmethyl, dimethoxybenzyl, naphthylmethyl, and (ethoxycarbonyl)ethyl;

R<sub>2</sub> is hydrogen;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>4</sub> is methyl, ethyl, propyl, phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, dihalophenyl-, pyridinyl, or benzyl;

R<sub>6</sub> is C<sub>1</sub>-C<sub>8</sub> alkyl, optionally substituted aryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl, and optionally substituted aryl; and

R<sub>9</sub> is aryl, substituted aryl, aralkyl, heteroaryl, substituted heteroaryl, heteroaralkyl, aralkoxy, heteroaralkoxy, substituted aralkyl, substituted heteroaralkyl, substituted aralkoxy, or substituted heteroaralkoxy.

9. The compound of Claim 1 comprising one or more of the following:

T and T' are absent;

R<sub>1</sub> is selected from hydrogen, optionally substituted lower alkyl, optionally substituted

benzyl, optionally substituted naphthylmethyl, and optionally substituted phenyl;

$R_2$  is optionally substituted  $C_1$ - $C_4$  alkyl;

$R_2'$  is hydrogen or optionally substituted  $C_1$ - $C_4$  alkyl;

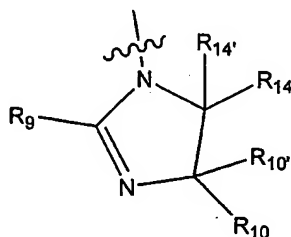
$R_4$  is hydrogen, optionally substituted alkyl, optionally substituted aralkyl, optionally substituted aryl, carbamyl, heteroaryl, or optionally substituted heterocyclyl;

$R_6$  is selected from optionally substituted  $C_1$ - $C_8$  alkyl, optionally substituted aryl- $C_1$ - $C_4$ -alkyl-, optionally substituted heteroaryl- $C_1$ - $C_4$ -alkyl-, optionally substituted heteroaryl, optionally substituted aryl,  $R_7O$ - and  $R_{11}NH$ -;

$R_7$  is chosen from optionally substituted  $C_1$ - $C_8$  alkyl and optionally substituted aryl;

$R_{11}$  is chosen from hydrogen, optionally substituted  $C_1$ - $C_8$  alkyl and optionally substituted aryl; and

$R_3$  taken together with  $R_5$  and the nitrogen to which they are bound, forms an optionally substituted imidazoliny ring of the formula:



wherein,

$R_9$  is chosen from hydrogen, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, optionally substituted heteroaralkyl, optionally substituted aralkoxy, or optionally substituted heteroaralkoxy; and

$R_{10}$ ,  $R_{10'}$ ,  $R_{14}$ , and  $R_{14'}$  are independently chosen from hydrogen, optionally substituted alkyl, optionally substituted aryl, and optionally substituted aralkyl.

10. The compound of Claim 9 comprising one or more of the following:

$R_1$  is chosen from hydrogen, ethyl, propyl, methoxyethyl, naphthyl, phenyl, bromophenyl, chlorophenyl, methoxyphenyl, ethoxyphenyl, tolyl, dimethylphenyl, chlorofluorophenyl, methylchlorophenyl, ethylphenyl, phenethyl, benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, hydroxybenzyl, tetrahydrofuranylmethyl,

dichlorobenzyl, furanylmethyl, dimethoxybenzyl, naphthylmethyl, and (ethoxycarbonyl)ethyl;

R<sub>2'</sub> is hydrogen;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>4</sub> is methyl, ethyl, propyl, phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, dihalophenyl-, pyridinyl, or benzyl;

R<sub>6</sub> is C<sub>1</sub>-C<sub>8</sub> alkyl, optionally substituted aryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl-C<sub>1</sub>-C<sub>4</sub>-alkyl-, optionally substituted heteroaryl, and optionally substituted aryl;

R<sub>9</sub> is aryl, substituted aryl, aralkyl, heteroaryl, substituted heteroaryl, heteroaralkyl, aralkoxy, heteroaralkoxy, substituted aralkyl, substituted heteroaralkyl, substituted aralkoxy, or substituted heteroaralkoxy;

R<sub>10</sub> is hydrogen or optionally substituted lower alkyl; and

R<sub>10'</sub> is hydrogen or optionally substituted lower alkyl.

11. The compound of Claim 1 wherein the stereogenic center to which R<sub>2</sub> and R<sub>2'</sub> is attached is of the R configuration.

12. The compound of Claim 1 wherein

T and T' are absent;

R<sub>1</sub> is benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, or hydroxybenzyl;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>2'</sub> is hydrogen;

R<sub>4</sub> is phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, or dihalophenyl-;

R<sub>3</sub> is hydrogen; and

R<sub>5</sub> is hydrogen.

13. The compound of Claim 1 wherein

T and T' are absent;

R<sub>1</sub> is benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, or hydroxybenzyl;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>2'</sub> is hydrogen;

R<sub>4</sub> is phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, or dihalophenyl-;

R<sub>3</sub> is -C(O)R<sub>6</sub>;

R<sub>5</sub> is selected from optionally substituted alkyl, optionally substituted cyclohexyl; phenyl substituted with hydroxy, halogen, lower alkoxy or lower alkyl; benzyl; heteroarylmethyl; heteroarylethyl; and heteroarylpropyl; and

R<sub>6</sub> is tolyl, halophenyl, methylhalophenyl, hydroxymethylphenyl, methylenedioxyphenyl, formylphenyl, halo(trifluoromethyl)phenyl-, or cyanophenyl.

14. The compound of Claim 1 wherein T and T' are absent;

R<sub>1</sub> is benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, or hydroxybenzyl;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>2</sub>' is hydrogen;

R<sub>4</sub> is phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, or dihalophenyl-;

R<sub>3</sub> is -C(O)R<sub>6a</sub>;

R<sub>5</sub> is selected from optionally substituted alkyl, optionally substituted cyclohexyl; phenyl substituted with hydroxy, halogen, lower alkoxy or lower alkyl; benzyl; heteroarylmethyl; heteroarylethyl; and heteroarylpropyl; and

R<sub>6a</sub> is chosen from phenyl substituted with halo, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, cyano, nitro, methylenedioxy, or trifluoromethyl and naphthyl.

15. The compound of Claim 1 wherein T and T' are absent;

R<sub>1</sub> is benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, or hydroxybenzyl;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>2</sub>' is hydrogen;

R<sub>4</sub> is phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, or dihalophenyl-; and

R<sub>5</sub> taken together with R<sub>3</sub> is an optionally substituted imidazolyl.

16. The compound of Claim 1 wherein T and T' are absent;



R<sub>1</sub> is benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, or hydroxybenzyl;

R<sub>2</sub> is optionally substituted C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>2'</sub> is hydrogen;

R<sub>4</sub> is phenyl, halophenyl-, methylphenyl-, methoxyphenyl-, cyanophenyl-, trifluoromethylphenyl-, or dihalophenyl-;

R<sub>5</sub> taken together with R<sub>3</sub> is an optionally substituted imidazoliny.

17. A pharmaceutical composition comprising a pharmaceutical excipient and a therapeutically effective amount of a compound of any of Claims 1-16.
18. A method of treatment comprising administering an effective amount of a compound of any of Claims 1-16 to a patient suffering from a cellular proliferative disease.
19. The method of Claim 18 wherein the cellular proliferative disease is cancer, hyperplasia, restenosis, cardiac hypertrophy, an immune disorder or inflammation.
20. A method of treatment for a cellular proliferative disease comprising administering to a patient suffering therefrom a compound of Claim 1 in an amount sufficient to modulate KSP kinesin activity in cells affected with the disease.
21. A kit comprising a compound of any of Claims 1-16 and a package insert or other labeling including directions for treating a cellular proliferative disease by administering an effective amount of said compound.